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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,608	10/23/2003	Trent Hayes	3655-0208P	5913
2292	7590	06/07/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			NGUYEN, CHAU N	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/690,608	Applicant(s) HAYES ET AL.	
	Examiner Chau N Nguyen	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature of the (first, second, third, etc.) intervals which vary along the length of the cable as claimed in claims 1, 22, 35, 39 and 42 and the feature of the first, second, third and fourth twisted pairs being continuously twisted about each other along the length of the cable with a fifth interval which varies along the length of the cable as claimed in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: throughout the specification, please change "three hundred and sixty degrees" to --three hundred sixty degrees--. Appropriate correction is required.

Claim Objections

3. Claims 1-45 are objected to because of the following informalities: through out the claims, please change "three hundred and sixty degrees" to --three hundred sixty degrees-- . Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 22, 35, 39 and 42, the term "purposefully" renders the claims indefinite and suggested to be deleted.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 20, 22-24, and 39-41 are rejected under 35 U.S.C. 102(b) as being anticipated by JP6-349344 (JP'344).

In the following rejection, it is assumed that the interval vary along the length of the cable.

JP'344 discloses a cabling media (Figs 3 and 4) comprising a first twisted wire pair including first and second conductors, each separately surrounded by an insulation, wherein the first conductor and the second conductor are continuously twisted about each other along a length of the cabling media, and wherein the first conductor and the second conductor twist completely about each other, three hundred sixty degrees, at a first interval which varies along the length of the cabling media; a second twisted wire pair including third and fourth conductors, each separately surrounded by an insulation, wherein the third conductor and the fourth conductor are continuously twisted about each other along the length of the cabling media, and wherein the third conductor and the fourth conductor twist completely about each other, three hundred sixty degrees, at a second interval which varies along the length of the cabling media; a third twisted wire pair including fifth and sixth conductors, each separately surrounded by an insulation, wherein the fifth conductor and the sixth conductor are continuously twisted about

each other along the length of the cabling media, and wherein the fifth conductor and the sixth conductor twist completely about each other, three hundred sixty degrees, at a third interval which varies along the length of the cabling media; and a fourth twisted wire pair including seventh and eighth conductors, each separately surrounded by an insulation, wherein the seventh conductor and the eighth conductor are continuously twisted about each other along the length of the cabling media, and wherein the seventh conductor and the eighth conductor twist completely about each other, three hundred sixty degrees, at a fourth interval which varies along the length of the cabling media, wherein the first interval varies in length within a first range of values, the second interval varies in length within a second range of values, the third interval varies in length within a third range of values, and the fourth interval varies in length within a fourth range of values (re claims 1, 40 and 41). JP'344 also discloses the first range of values is different than the second, third and fourth ranges of values (re claim 2), the second range of values is different than the third and fourth ranges of values (re claim 3), the third range of values is different than the fourth range of values (re claim 4), and a jacket enclosing the conductor pairs (re claim 39). Re claim 20, the cable of JP'344 would meet the specifications of CAT 5 cabling since it comprises structure and material as claimed. Claims 22-24 are method counterparts of claims 1-3.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 5-12 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'344.

Claims 5-12 and 25-30 additionally recite ranges of values and mean values of the intervals. Although not specifically disclosed by JP'344, it would have been

obvious to one skilled in the art to choose suitable values and mean values for the intervals of JP'344 to meet the specific use of the resulting cable since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

In re Aller, 105 USPQ 233.

11. Claims 1, 13-19, 21, 22, 31-38 and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbs (5,739,473) in view of JP'344.

Zerbs discloses the invention substantially as claimed including the first, second, third and fourth twisted wire pairs being continuously twisted about each other along the length of the cabling media, and wherein the first, second, third and fourth twisted wire pairs twist completely about each other, three hundred sixty degrees, at a fifth interval (re claims 13&31), the first, second, third and fourth twisted pairs not having individual shield layers to shield each from the other (re claim 17), a jacket surrounding the twisted pairs (re claim 18), the conductors being metallic conductors including copper and being 24 gauge (re claim 19), fifth through twenty-fifth twisted wire pairs (re claim 21), and the plurality of conductor pairs being twisted together to form a core (re claim 36).

Zerbs does not disclose each of the first, second, third and fourth twisted pairs having a varied twist interval along the length of the cable (re claims 1 and 22) nor the fifth interval (or the core strand interval, re claim 42) being varied along the length of the cable (re claims 13&31). JP'344 teaches a cable in which the twist interval of each twisted pair is varied along the length of the cable. It would have been obvious to one skilled in the art to apply the teaching of JP'344 into the cable of Zerbs to prevent signal time lag as taught by JP'344. It would also have been obvious to one skilled in the art to apply the same teaching of JP'344 for the fifth twist interval (or the core strand interval) of Zerbs to further prevent cross-talk among the adjacent groups of conductor pairs.

Re claims 14-16, 32-35, 37 and 43-45, it would have been obvious to one skilled in the art to choose suitable values and mean values for the twist intervals of Zerbs (modified by JP'344) to meet the specific use of the resulting cable since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Re claim 38, the modified cable of Zerbs would meet the specification of CAT 5 cable since it comprises structure and material as claimed.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen
Primary Examiner
Art Unit 2831